Projektberichte

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The formal structure of a fantasy

The golden belt

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Abstract: Through GABEK-Analysis of one fantasy, the following heuristic theses are formulated: Fantasies connect eidetic ideas to gestalt-like wholes. They consist of many parts which in turn contain smaller elements. However, they are structured clearly, showing surprising symmetries between parts that are interconnected by recurring motifs. New and unique contents emerge in the central areas of fantasies, which break the symmetries and emphasize new motifs.

Anhand der GABEK-Analyse einer Fantasie werden folgende heuristische Thesen formuliert: Fantasien bringen bildhafte Vorstellungen in einen gestalthaften Zusammenhang. Sie sind klar strukturiert. Fantasien bestehen aus vielen inhaltlich voneinander abgrenzbaren Teilen, die ihrerseits wieder kleinere Elemente umfassen. Fantasien weisen überraschende Symmetrien zwischen ihren Teilen auf, die untereinander mehrfach verbunden sind. Diese enge Vernetzung zwischen den Inhalten einer Phantasie kommt durch Wiederholung von Motiven zustande. In zentralen Bereichen der Phantasie tauchen Inhalte auf, die einzigartig und neu sind. Damit wird die Symmetrie durchbrochen und einmalige Motive werden besonders hervogehoben.

Keywords: Fantasies, Gabek[®], Qualitative Data Analysis (QDA), linguistic gestalt building, narrative text analysis

1. Introduction

1.1 The problem

Is it possible to reconstruct narrative texts as linguistic gestalten? The first intuitive answer seems to be "of course not," for the reason that the serial order of motifs is essential in fantasies, tales and stories; whereas for gestalten, holistic comprehension is decisive. Thus I will first analyze the synchronous structure of a short fantasy, to delineate the serial order. After this, by checking the relations between all the motifs

occurring in the text, I will analyze the diachronic structure to see if this also results in the structure of a linguistic "gestalt."

1.2 The text

I use an individual fantasy written down by a female student within a few minutes, according to the rules for an exercise to produce daydreams by Keyserling (1983: 190). Fantasies and dreams connect different perceptional images and visions in serial order. This can be demonstrated by an association experiment. Starting with a symbolladen short text as stimulation, thought chains are created. In such a process of association, the thought chain proceeds despite fissures. If the chain of association returns to its point of departure (i.e., to the initial images), then we can speak of this as a unit of thought and ask if it fulfills the rules of a "gestalt" (Zelger 1991, 1993, 1999, 2004, 2010). The following beginning of a story was provided as a cue to stimulate the imagination (Kayserling 1983, p. 190f):

I am in a dark wood, at a crossways, I can hear horses; a horse approaches from the wood. A rider appears in a purple cape: as he approaches I recognize a skeleton with a crown. It bends down from his horse and offers me a golden chalice. What shall I do?

This situation provided by Kayserling should be envisaged in the "active imagination," followed by three minutes of "free fantasizing." The story is written down during the course of the fantasy, and the exercise is concluded by narrating this vision. The written text of the story represents an immediate authentic reproduction of the contents of fantasy. I will use this text as an example of a narrative text:

The rider passes me a golden chalice -I reflect for a moment - the skeleton waits motionlessly and stares at me from the deep black holes that are his eyes -I hesitate but then my inquisitiveness wins and I find myself drinking the sky-blue liquid -awarm sound rings in my ears and everything appears in a warm red light - and then I am suddenly raised from the ground and placed on the horse behind the rider - the horse sets off, gets faster and faster, dashes headlong towards a huge cliff -I want to scream but at the same moment the cliff gives way - inside the rock it is comfortably warm and there suddenly appears a town - we ride towards it - the horse stops in front of the gates -I get off -I knock at the gate and hear laughter - happy voices but no one appears to hear me -I start to walk round the town walls and reach a dark opening -I climb in - in the room there are two women in white flowing gowns who say that they have been waiting for me - they lead me to a heavy iron door - it opens behind it there is a wonderful room with a blue tester bed - the two women follow one brings a gown that belongs to another age - it is embroidered with diamonds - the other brings me a belt of pure gold, whose buckle bears a snake's head motif -I dress -I am led through long winding passages – then I can suddenly hear the happy voices again – a door opens – we enter a hall in bright light – there are many people there – they are dancing and making merry – at the end of the hall there is a throne – a man is sitting on it – he is wearing the same crown and the same robe as the mysterious rider – suddenly there is a great commotion – the doors on the other side burst open and huge spiders creep in – the king rises – he turns pale – turns into a skeleton – the white horse flies in through the window – the skeleton jumps onto its back – comes towards me – pulls me onto the horse and gallops off – I look back – the people suddenly turn into mice – the ride grows faster and faster – I start to gasp for air – I fall – the red light surrounds me again – I open my eyes – am lying on the grass at the crossways in the woods – the sun is shining through the trees – near me a snake is crawling towards the undergrowth, and a mouse is peeping out of a hole in the ground.

1.3 The text as a unit of images

It is immediately obvious that the thought sequence is not unordered. We rather have a connected whole, a kind of fairy tale, in which beginning and end are connected. The text is not divided into complete sentences by full stops but is instead separated by hyphens, pointing to the fact that the fantasy is an uninterrupted sequence of images. The fantasy appears to be a cyclically closed unit that starts from the given cue and returns to it.

2. The synchronous analysis

2.1 Associative thinking

For generating the text we used an experiment of association. However, in contrast to usual experiments of association, where single concepts are given as cues to produce an open-ended linear chain of concepts, we used the description of a strange situation as the initial stimulation. This was due to the fact that statements, not concepts, are the fundamental units of meaning (Zelger 2013). Our experiment led to a concatenative net of episodes that are not seen as connected in everyday consciousness. Several situations were described in the association process, which together again form a still more complex whole. In the individual descriptions, words occurring in the initial stimulating text were reused in such a way that all the units of text again are closely networked and connected meaningfully.

2.2 Tripartite Structure of the Fantasy

If we look more closely, we will notice a serial order of three parts: the introduction at the crossway (1), the central visions (2), followed by events leading back to the crossing (3).

If, as it were, we fold the daydream in the middle, we will obtain surprising symmetries (see figure 1 and 2): similar motifs now lie next to each other. Of the three main sections, the opening lead-in to the main events, and the closing return to the starting point are themselves clearly divided into three parts: "the skeleton at the crossways in the wood" (1.1 and 3.3), "everything appears in a warm red light" (1.2 and 3.2), and "fast motion arises" (1.3 and 3.1).



Fig. 1: Recurring motifs in opening (1.1, 1.2, 1.3) and closing (3.1, 3.2, 3.3) of the fantasy and symmetry axes caused through 6 caesuras

The trifold partition of vision 2.1 into 2.1.1, 2.1.2, 2.1.3; 2.2 into 2.2.1, 2.2.2, 2.2.3 and 2.3 into 2.3.1, 2.3.2, 2.3.3 results from the conspicuous structuring through the cliff door (2.2.1), the "dark opening in the town wall" (2.1.3), and the "doors that burst open" (2.3.1), and by the retrospective (2.3.3). These occur as caesuras. A special

position is attained by the retrospective in 2.3.3, separating parts 2 and 3 while apparently not belonging to either. Beside these, the central part 2.2.2 is further separated into three parts through an "iron door" (2.2.2.1) and another "door" (2.2.2.3). After the caesuras, new scenes open up. It is surprising that the fantasy is clearly structured through such symbolic images so that the overall structure results from these six caesuras. I wish to draw particular attention to these separating images through which the whole can be divided into meaningful small units of fantasy.

To the central visions in 2.2.2, we again see a prelude: "two women lead" in 2.2.1. In part 2.2.3, an abrupt end or return, is at least hinted at: "suddenly a great commotion arose."



Fig. 2: The tripartite structure of the fantasy

We thus notice that part 2 is far more detailed than the parts 1 and 3, which function as prelude and epilogue. In view of the different lengths of the individual sections, we may ask whether the central visions in 2.2.2.2 can meaningfully be subdivided further

without having to introduce arbitrary distinctions. This does seem to be possible. At least 2.2.2.2 naturally falls into the following parts:

2.2.2.1 wonderful room with tester bed – the women follow

2.2.2.2 diamond embroidered robe, golden belt, buckle with snake's head motif

2.2.2.3 the women lead through long winding passages – happy voices

We can show greater detail in other parts of the analysis as well. Thus sections 2.2.1 and 2.2.3 can also be subdivided into three meaningful parts. Yet the structure becomes increasingly fuzzy from one level to the next. The separation of the individual parts becomes more and more questionable. The more detailed we become, the more obscure the structure gets. Perhaps this is related to the incomplete protocol of the fantasy. The text analyzed is a translation and thus a recoding of the original daydream, which may have given rise to mistakes. It is interesting that the investigation of other fantasies (Zelger 1995) and dreams (Zelger 2006) also exposed a tripartite structure.

2.3 Self-similarity of the fantasy

The analysis of transcribed fantasies and dreams showed – to our surprise – that they were not unordered. It may be the case that breaks and abrupt changes between series of images in fantasies or in the linguistic encoding of a dream may appear chaotic. Perhaps it is just these boundaries that create a structured whole. The above example has shown that a subdivision into meaningful smaller units is possible. The result reminds us of self-similar structures.

Thus in formal terms we might be able to speak of self-similarity, but we have seen that part 2 is always more detailed than parts 1 and 3. 2.2 was subdivided into 2.2.1, 2.2.2, and 2.2.3. The middle part 2.2.2 was further subdivided into 2.2.2.1, 2.2.2.2, and 2.2.2.3 and 2.2.2.2 is further subdivided into three parts. Accordingly also the middle parts 2.1.2 and 2.3.2 were further subdivided into three subcomponents. Thus we obtain a subdivision in which the middle part of a three-part sequence is again split into three units. As all units of similar length, we can envisage the structure as in figure 2. The middle part is cut out of a three-part sequence and replaced by three new parts. This, furthermore, is the description of operations that can produce Koch Curves (Mandelbrot 1987, p. 46-85).

Of equal interest is the fact that we can speak of self-similarity in regard to content. We have provided here at least one example that the basic meaning orientation (the wish to get married with a prince) can be interpreted on different levels as prelude, vision and epilogue. I have shown elsewhere (Zelger 1995) that in a further fantasy, the same female student very dramatically presented a conflict and its solution

topicalized on various levels in another tripartite fantasy. This means that the analysis of a part of a vision allows us to draw conclusions about the whole. Two further examples of self-similar content were described in Zelger (1995).

Of course a fractal structure, as obtained in mathematical constructs, is not to be expected; but I wish to draw attention to the symmetries of content.

3. The diachronic analysis

3.1 Recurring motifs

We have already noted the symmetric correspondences in content between the opening of the fantasy in 1.1, 1.2, 1.3 and the closing in 3.3., 3.2, 3.1. That the caesuras of images are symmetrically arranged can easily be seen in figure 1. Beyond that, 2.1.2.1 ("riding into a town"), 2.1.2.2 ("the horse stops, the town gate is closed"), 2.3.2.2 ("the horse flies in through the window"), and 2.3.2.3 ("the skeleton pulls me onto the horse and gallops off") can be seen as text units with recurring motifs. There are further correspondences between 2.2.1 ("the women lead"), 2.2.2.2.1 ("the women follow me") and 2.2.2.2.3 ("women lead through winding passages") as well between 2.1.2.3 ("happy voices").

3.2 The network of motifs

I have already shown that the individual text units set themselves off from each other by caesuras. We must now ask the question how these text units relate to each other and whether they form together a coherent whole. For this purpose we abandon the temporal sequence of events and instead form a network of units in which the recurring motifs (images or key concepts) form the nodes, which are related to each other through the text units.

If we create a network of motifs, we must again ask the question whether the caesuras of images should be included as text units or not. These are the parts 2.1.1, 2.1.3, 2.2.2.1, 2.2.2.3, 2.3.1 and 2.3.3, represented in figure 1. The image ceasuras are necessary to separate the text units in the fantasy. Apart from the retrospective (2.3.3), which takes on an ambiguous position, the other five caesuras would introduce only these further nodal concepts into the network: "door," "opening" and "enter." The image caesuras appear to be redundant, which unnecessarily complicates the network of the fantasy. We can take them also as metalinguistic symbols indicating: "A new part is coming". Therefore these will be omitted in figure 3. The following representation of the fantasy as a network of motifs and units of text is not a dynamic but a static one, from which we can see how motifs are connected by text units in the course of the fantasy. As we find only six caesuras in the fantasy, seven text units

result. We analyze the relations between the text units by identifying the nodal concepts or motives occurring at least in two text units. Of course it would also be possible to build smaller text units, as we have represented them in figure 2. That is, we could divide each text unit that we receive through the caesuras into three smaller parts. However, we take only the text units as they are given by the caesuras according figure 1. We can view the formal properties of the resulting concept network in figure 3.



Fig. 3: The fantasy as a network of motifs. It shows how the 7 text units (without caesuras) are connected by nodal concepts.

3.3 The richness of text units

If we measure the size of text units by the number of lexical key expressions contained in the text units, then the text units are found to be very different. The smallest text unit only contains 8 lexical concepts, the longest one 37. I represent the nodal concepts for each text unit in the second column, and singular concepts in the third column, of the following table. The total text contains 137 different lexical key concepts, of which 20 nodal concepts connect the seven text units with each other and 117 singular concepts occur only once in the total text. The former define the structure of the fantasy, the latter display the rich contents of the text units.

Text_unit	Nodal concepts	Singular concepts
1	huge, horse, light, rider, warm, skeleton, golden, faster, red	pass, chalice, reflect, moment, wait, motionless, stare, deep, black, holes, eyes, hesitate, inquisitiveness, win, drink, sky- blue, liquid, sound, ears, raised, ground, placed, set off, dash, cliff, scream
2.1.2	horse, happy, voices, appear, warm, ride	town, stop, gates, get off, knock, hear, laughter, walk round, walls, reach, dark opening
2.2.1	lead, room, white, gowns, women	flowing, waiting, stand
2.2.2.2	happy, voices, women, lead, room, gowns, , golden, lying	wonderful, blue, tester bed, follow, bring, another age, belong, embroidered, diamonds, belt, pure, buckle, bear, snake's head, dress, winding, passages
2.2.3	huge, happy, light, rider, appear, crown/king	hall, bright, people, dancing, making merry, throne, man, sitting, wearing, robe, mysterious, commotion
2.3.2	huge, horse, skeleton, crown/king, white	spiders, creep in, rises, pale, flies, window, jumps, back, comes toward me, pulls, gallops off
3	light, faster, ride, red, lying	gasp for air, fall, surrounds me, open, eyes, grass, crossways, woods, sun, shining, trees, snake, crawling, underground, mouse, peeping, hole, ground

 Table 1: Nodal and singular concepts of the text units

The text was handwritten within five minutes. I suppose that it is impossible to plan and produce such a well-structured and rich text within a few minutes fully consciously. In truth it presupposes an undisturbed interaction between the systems of consciousness and unconsciousness (cf. Sergin 1992, Zelger 2000) of the author. Therefore the text seems to be of particular value for gaining a deeper insight into the thoughts and attitudes of the author of the text. These are opened especially by the singular concepts of the right column in the above table. They seem to express images and wishes of a young woman to meet a prince, to marry him and hindrances and fears related to these wishes.

4. Does the fantasy fulfill the rules for a linguistic Gestalt?

A linguistic gestalt presupposes splitting the full text into parts, connecting some of them to a specific meaningful group of text units, and summarizing them into a short recap. A linguistic gestalt therefore is a linguistic entity on two levels, consisting of a text group and a summary derivable from the text group. The gestalt should fulfill the following conditions (Zelger 1999, 2004, 2010):

4.1 The size of text units

The size of text units shouldn't be larger than can be kept in mind for at least 10 seconds. Therefore the single text units should include about three to nine lexical key concepts. More concepts cannot be kept in consciousness simultaneously (cf. Miller 1956).

We see that this condition is not fulfilled by this fantasy. The units of text have from 8 to 37 lexical concepts. This points to the fact that the fantasy is very rich in content and differs strongly in this respect from the usual informative verbal data most often used in gestalt-building procedures with GABEK.

4.2 Connectivity

All text units within the group should be closely connected with each other; i.e., each text unit in the group must contain at least three key concepts that also occur in other text units of the same group. Through the interrelation of the text units with each other, the gestalt can be distinguished from a larger context.

It is obvious that in figure 3 all text units are cyclically connected within the network. This means that every part contains at least two motifs which themselves occur at least twice in the fantasy. Here the seven text units contain between five and nine nodal motifs. The recurring motifs are the nodes through which the text units are connected to each other. They lead to the impression that the whole story results as one complex unit of meaning.

4.3 Variety of text units

The text units within the group must be sufficiently distinguishable from each other. Each unit must contain something new so that it appears as a kind of complement to all other text units in the group.

In our fantasy, there are no two text units whose nodal concepts are identical, and there is no one text unit with nodal concepts included in the set of nodal concepts of any other text unit. Rather, all the sets of nodal concepts of all text units are different and point to strong differences in the referring content. Moreover, the text units of the fantasy include many singular concepts, which demonstrates a high degree of differentiation and leads to the impression that the fantasy is varied and interesting.

4.4 Formal distance

The necessary steps to reach from each text unit to every other in the text group via nodal concepts may not exceed the maximum of two steps.

We see according figure 3 that the path from each text unit to every other one is maximally 2.

A linguistic gestalt must furthermore meet semantic and pragmatic conditions:

4.5 Correctness of derivation

A gestalt doesn't consist only of the text group; it also includes a summary of the text units, using the nodal concepts of the group as key concepts of the summary. The recap must be true in all situations, where all the text units of the group are true. Definitely this would not hold if in the summary, new concepts would be used that do not occur in the text group. The summary can contain only key concepts from the text group.

However, it is not easy to formulate a summary of the fantasy using only the nodal concepts of figure 3. We formulate a recap with the nodal concepts including some singular concepts of the fantasy too:

The rider, a skeleton passes me a golden chalice – everything appears in a warm red light – and then I am suddenly raised on the horse behind the rider – the horse sets off – gets faster and faster towards a huge cliff – inside the cliff it is warm – we ride towards a town – behind the gate I hear happy voices – two women in white gowns lead me – they bring me a gown with a golden belt – I hear the happy voices again – we enter a hall in bright light – on the throne a man is sitting wearing the same crown as the mysterious rider – suddenly huge spiders creep in – the king turns into a skeleton – the skeleton jumps onto the horse – pulls me onto it – the ride grows faster and faster – I fall – the red light surrounds me again – I am lying at the crossways in the woods.

This summary fulfills the rule of correctness of derivation, but we needed to include some singular concepts from the text group. It is a short version of the fantasy, which the author could tell in the class. According the terminology of GABEK, it is the surface version, which can be founded through the full text, i.e., the deep version of the fantasy.

4.6 Semantic demonstrability of the text group

A group of text units is rendered meaningful only if it is possible to demonstrate at least some of the conceptual relations between the text units intersubjectively through an example in our life-world. Therefore an ideal paradigmatic model or example must exist. The example could be realized in a given modeling facility. As Pask (1976, 1992) suggests, "modeling facility" refers to the material immediately available to the individual, using which he can produce observable units, e.g., models that represent the relations assumed through the text units in the text group. As it is not possible to build an inconsistent model – we cannot give an example for a quadrangular triangle – so the model is presented in order to demonstrate that the text units are free of contradictions. Such a demonstration should be such that it can be accepted as convincing by different individuals.

It doesn't seem to be possible to represent our fantasy intersubjectively by an example in our empirical, experienced life-world. We cannot demonstrate the fantasy through an existing material model that is accessible to everybody. However, if we leave our empirical world and give up the assumption that the fantasy says something about the real world, then perhaps a video or a computer game could be used to model the fantasy where metamorphoses are possible, etc.

Finally one pragmatic condition should be fulfilled:

4.7 Pragmatic applicability of the summary

From a pragmatic point of view, a group of text units is relevant for an individual x in the situations s and at the point in time t only if the individual x believes in s and t such that the summary of the text group may be applicable as a perception-, orientation- or action pattern.

Can we assume that the above summary fulfills this condition? Is it possible that the fantasy could be used as a pattern of orientation for an individual? In contrast to the rule of semantic demonstrability, it is not stipulated here that the belief in the applicability of the summary be accepted intersubjectively. It is enough that one single individual believes it. This is already fulfilled if the author of the text herself assumes the summary would be applicable in a possible future situation. Like a selectively remembered dream, the summary for the author could be a story of hope and self reflection, according her own interpretation, which may not be generalizable to other individuals.

5. Discussion

We have seen that, with the exception of the rule of size (4.1), the formal rules about the structure of gestalten (4.2, 4.3, 4.4) are fulfilled. This is surprising for a text written down within about five minutes, for which it was not possible to plan or control the structure consciously. Therefore I conclude that there must exist an unconscious mechanism of structuring the verbal text production (cf. Bickerton¹, 1990, 57).

This mechanism could be a filtering system that ensures that the produced text units are connected with each other by recurring concepts (4.2), that too similar text units are eliminated (4.3), and that all the text units together can be perceived as a new larger unit. This happens because all the text units together are building a small world (Lösch & Zelger 2013) so that each text unit is reachable from any other within two steps (4.4).

The stimulus for the text production coming from outside (as in our fantasy) or from inside (as, for example, in remembered experiences) makes possible a very broad range of possible reactions that can be filtered by the process of linguistic production to result in text groups called "linguistic pregestalten."

I will show in another article in this volume how a large verbal data base can be processed such that text groups fulfilling the rules 4.2, 4.3. and 4.4 are produced automatically by GABEK with software support through WinRelan. However, there remain the rules 4.1 and 4.5, 4.6 and 4.7, which must be controlled consciously.

The infringement of rule 4.1 shows that the unconscious text production is very rich. It seems that the filtering system of the unconscious system produces a connected system of text units, but does not filter the single text units in their richness. To process this richness, we need further filtering. Ordinarily we can keep in mind only from five to nine concepts (Miller 1956), generally nodal concepts included in the concept network (figure 3). These concepts are used predominantly when forming summaries and conducting conversations with other individuals, because these concepts are included in the common vocabulary of most people and are used to form the structure of any text.

However, if we are interested in a deep analysis of a text, e.g., of our fantasy, then we should pay attention to the whole range of contents presented by singular concepts.

¹ Bickerton presents the following sentence as an example of the unconscious control of grammatical correctness: "Try to rearrange any ordinary sentence consisting of ten words." The words of this sentence can be ordered in 3,628,800 different ways serially. However, according Bickerton, the above is the only correct one. How it is possible to learn it? Certainly it is not possible through explicit rules. Bickerton deduces that the correct serial order is a performance of the unconscious system of linguistic processing.

Fantasies can show us a way to detect those concepts and symbols that are of special relevance for a deep analysis:

- 1) We must first determine the nodal concepts. The repetition of concepts within a fantasy is primarily structure forming, and we need to be aware of this structure to understand the text. However, the concepts recurring in the fantasy do not represent the most relevant meanings. Instead, the symmetries created indirectly reference the relevant parts of text.
- 2) The motifs relevant to the specific person tend to occur only once in the fantasy. The more important a content is, the more likely it seems to be that these concepts do not recur in a stereotype form. The relevant contents are framed by less relevant contents. In our fantasy, the most relevant concepts will be found as singular concepts in the central text units 2.2.1 (flowing, waiting, stand) 2.2.2.2 (wonderful, blue, tester bed, follow, bring, another age, belong, embroidered, diamonds, belt, pure, buckle, bear, snake's head, dress, winding, passages), and in 2.2.3 (hall, bright, people, dancing, making merry, throne, man, sitting, wearing, robe, mysterious, commotion).
- 3) If we find more than one framed centre, then the central theme is introduced in an always new perspective and also in a very rich language. In our fantasy we find a second centre as a prelude in 2.1.2 (town, stop, gates, get off, knock, hear, laughter, walk round, walls, reach, dark opening) and a third one as an epilogue in 2.3.2 (spiders, creep in, rises, pale, flies, window, jumps, back, comes toward me, pulls, gallops off). These also refer to the central theme, to the wishes of a young woman to meet a prince and to marry him.
- 4) If a number of symmetrical axes occur, then the same central theme is addressed in a number of ways. This means that various points of view complement each other. We can therefore draw conclusions about the central meaning of the whole fantasy based on a part of it. Individual symbols refer to the same topic. This reduces the ambiguity of pictorial motifs and symbols as well as of the number of possible interpretations. Visual and symbolic representations can, in this way, attain a kind of clarity by indirect means without having to describe the problem situation in direct terms.

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